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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,831

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Jun Izumi

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EXAMINER

ZEMEL, IRINA SOPJIA

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

11/12/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,831	Applicant(s) IZUMI ET AL.	
	Examiner Irina S. Zemel	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,5,7-9,21,23,25,26,28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,5,7-9,21,23,25,26,28 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 4-5, 7-9, 21, 23, 25-26, 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodemura U.S. Patent 6,472,082 , (hereinafter "Kodemura").

The disclosure of Kodemura is discussed in detail in the previous office action, which discussion is incorporated herein by reference.

Insofar as the amended limitation regarding the distribution degree, it is still reasonable believed that the claimed limitation is inherently met by the examples of Kodemura as disclosing the grafting process which is substantially identical to the claimed process, thus resulting in substantially identical product inherently exhibiting the claimed properties.

Response to Arguments

Applicant's arguments filed 8-11-2009 have been fully considered but they are not persuasive. The applicants argue that the claimed process is not disclosed or suggested by the Kodemura reference since the Kodamura reference does not disclose or suggest the claimed molar ratio of peroxide to the modifying agent. The applicants provided calculations for their illustrative example, the comparative example (formerly examples disclosed in the instant specification as illustrative examples of the claimed invention), and example 3 of Kodemura (which seem to be based on erroneous calculations) While the

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examiner agrees with the applicants statement that the reference does not discuss in detail the ratios of peroxide and modifying agents, the examiner disagrees that the ratios falling within the claimed ranges and similar to the illustrative examples are not disclosed in Kodamura. Specifically, comparative example 3 discloses 3 parts of maleic anhydride (MA) and 3 parts of parts of dicumyl peroxide (DCP), expressly disclosing ratio of above 0.7, and also comparative examples 28 and 29, using 10 parts of modifier (either MA of allyl glycidyl ether) and 10 part by weight of DCP (the amounts closely corresponding to the illustrative example 1 according to the n=instant specification), which, again, results in ratios of the two components in excess of 0.7, which fully correspond to the claimed ratio.

While it is noted that degree of grafting for the comparative examples is lower than the degree of grafting for illustrative example using higher amounts of modifier, the claimed invention is not defined by any degree of grafting.

The applicants argue that because “according to the claimed process the addition reaction is possible without ring opening of the main-chain cycloolefin chain skeletons, the inventive method can provide modified cycloolefin copolymers in which the functional groups are added uniformly in the cycloolefin copolymer without producing the heterogeneous structures commonly attributed to the ring-opening reactions utilized in conventional addition processes.” However, the reaction process disclosed in Kodemura is substantially identical to the claimed process. As discussed in the previous office action, the claimed ratio of peroxide to modifier (or grafting agents) are NOT

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disclosed or recognized as governing the uniformity of grafting characteristics.

The only relevant disclosure of the reference is concerned with side reactions and hydrogen abstracting, which has nothing to do with uniformity of grafting, but rather pertains to actual grafting (degree of grafting) reaction. In fact, the illustrative example 4, now re-labeled as Comparative example 2, exhibits the claimed DR, while having significantly lower ratio of peroxide to modifier, i.e., 0.09 according to applicants' calculations.

The applicants further argue that they disagree with "the Office Action to the extent it implies that the claimed peroxide:modifier ratio used in the method has no significant impact on the final product. Applicants have presented, by way of illustrative and comparative examples, evidence showing that the solubility of the resulting compounds in various solvents is improved by employing the claimed peroxide:modifier ratio."

The examiner wishes to point out that the Office action did not imply that the claimed ratio has no effect on the properties of the final product at all, rather that the claimed ratio has not been disclosed as having effect on the claimed DR or uniformity of grafting characteristics, which is so according to the applicants' own disclosure and example now labeled as comparative example 4.

It is noted that solubility is different for the examples that employ the peroxide:modifier ratio within the claimed range as compared to lower ratios.

However, it is believed that identical or similar properties would have to be inherently exhibited by the products of comparative examples using 10 pbw of each of peroxide and the modifier as products of substantially identical process

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to the claimed process. There is absolutely nothing on the record to provide any evidence to the contrary.

Therefore, in view of the fact that Kodemura discloses substantially identical process in comparative examples with identical ratios and in view of the fact that the claimed ratios are not disclosed as governing the DR, the invention as claimed is still considered to have been obvious from the disclosure of Kodemura.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

Irina S. Zemel
Primary Examiner
Art Unit 1796

ISZ